

REMARKS

Claims 1-13 are elected for prosecution in this case. Claims 1, 8, 9, 10, 11, 12, and 13 are amended to more clearly define the invention. Support for the amendments to claims 1, 8, 9, 10, 11, 12, and 13 can be found throughout the specification and more specifically on page 2 lines 14-16, page 3 line 29 to page 4 line 2, page 7 lines 4-6, page 8 lines 12-14, page 10 lines 19-30, Fig. 3 and Fig. 4. Thus, applicant respectfully submits that no new matter has been added by these amendments.

Rejection of Claim 5 under 35 USC 112, second paragraph.

Claim 5 is rejected as being indefinite because there is insufficient antecedent basis for the feature "said predetermined computation formula". Claim 5 has been formally amended to be depended on claim 4 which affirmatively recites "a predetermined computation formula". Therefore, Applicant respectfully submits that claim 4 provide sufficient antecedent basis for amended claim 5. Thus, withdrawal of the rejection of claim 5 is respectfully requested.

Rejection of Claims 11-12 under 35 U.S.C. 101

Claims 11 and 12 are rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter.

It is respectfully submitted that the claims as amended satisfy the requirements of 35 USC 101. Amended claim 11 recites a "processing device implemented method for generating an executable procedure" that stores "spreadsheet representative data" having "individual data items determining characteristics of an executable procedure" (i.e., in a particular location) and which parses and processes the data to "provide an executable procedure with characteristics determined by said individual data items" and "for use in processing data using said individual data items to provide processed data for output". Therefore the claim I system **adaptively transforms** the state (physical location) of spreadsheet representative data. Further, the system provides a result that is, useful in generating an executable procedure having characteristics of the data stored in a spreadsheet. The system also provides a result that is tangible (not abstract) since it places data in a particular accessible physical location (e.g., storage disk) and the result is concrete since the

processed data uses the individual data items to provide processed data for output. Thus, the output provided is repeatable as the executable application includes the characteristics of the individual data items stored in a spreadsheet.. Claim 12 is considered to comply with requirements of 35 USC 101 for similar reasons. Consequently, it is submitted this ground of rejection is no longer applicable and it is respectfully requested that it be withdrawn.

Rejection of Claims 1-13 under 35 U.S.C. 103(a).

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richburg (U.S. Patent NO. 5,159,687) in view of Peyton-Jones et al. (U.S. Patent Application Publication No. 2004/0103366 A1).

Amended claim 1 recites a system for generating an executable procedure. The system includes a repository including spreadsheet representative data. The spreadsheet representative data includes stored data elements comprising individual data items determining characteristics of an executable procedure. The system further includes an executable application for parsing and processing said spreadsheet representative data to provide an executable procedure with characteristics determined by said individual data items and for use in processing data using said individual data items to provide processed data for output. The system further includes a command processor for initiating execution of said executable procedure in response to user command. For the reasons presented below, Applicant respectfully submits that Richburg alone or in combination with Peyton-Jones fails to provide any 35 USC 112 compliant enabling disclosure that makes the present claimed invention unpatentable.

Richburg describes a method and system for automatic generation of program code using expert knowledge programmed into a knowledgebase. The knowledgebase includes program script units adapted to generic problems and instructions for composing the script units into output script. The system includes an application database to specify particular requirements for the process to be programmed within the generic set stored in the knowledgebase. A program processor responds to the application database and the knowledgebase to produce output files. (Abstract). Richburg merely automatically generates program code based on generic application code to simplify programming tasks. This is fundamentally different from the claimed arrangement which parses and processes

spreadsheet representative data for data items that are used in providing an executable procedure having characteristics associated with the data items.

The Office Action, on page 4, correctly acknowledges that “Richburg does not explicitly teach spreadsheet including stored data elements comprising individual data items determining characteristics of an executable procedure” as recited in the present claimed invention. Richburg is silent regarding the use of spreadsheet representative data and instead, uses data stored in a knowledge base to produce code. Richburg provides no 35 USC 112 compliant enabling disclosure of “an executable application for parsing and processing said spreadsheet representative data to provide an executable procedure with characteristics determined by said individual data items” as recited in claim 1 of the present invention.

Richburg (with Peyton-Jones) also neither discloses nor suggests “processing data using said individual data items to provide processed data output” as recited in claim 1 of the present invention. Richburg is silent regarding use of individual data items from a spreadsheet. Further, Richburg fails to provide any 35 USC 112 compliant enabling disclosure of the claimed feature and instead is merely concerned with automatically generating program code based on generic application code. In contrast, the present claimed invention advantageously allows a spreadsheet to be used to generate an executable procedure. The executable procedure contains characteristics defined by the spreadsheet data (page 2, lines 12-13). In this manner, updates to existing databases, for example a healthcare database, may be done without requiring any computer skills on the part of healthcare workers, for example (page 13, lines 11-12). Therefore, Richburg (with Peyton-Jones) neither discloses nor suggests the present claimed feature.

Peyton-Jones is cited conjunction with Richburg in the Office Action for teaching the use of spreadsheets for storing data elements determining characteristics for a procedure used in processing data. Applicant respectfully disagrees. Applicant respectfully submits that Peyton-Jones is fundamentally different from, and unrelated to, the present claimed system. Peyton-Jones describes a user defined function capability in a spreadsheet application that allows users to create new named functions. The spreadsheet functions may be defined from formulae entered in a worksheet or function sheet of a spreadsheet application. The formula interface expands the formulae feature to provide functions that can be imported, exported, customized, and compiled (Abstract). However, for the reasons presented below, Peyton-

Jones (with Richburg) fails to provide any 35 USC 112 compliant enabling disclosure of the present claimed invention.

Peyton-Jones (with Richburg) neither discloses nor suggests “an executable application for parsing and processing said spreadsheet representative data to provide an executable procedure with characteristics determined by said individual **data items**” as recited in claim 1 of the present invention. Peyton-Jones merely generates a function based on **formulae** entered into a worksheet. Peyton-Jones teaches and is exclusively concerned with a formula and associated encapsulated functions that can be imported, exported, customized and compiled (abstract). In contrast, the present claimed invention includes an executable procedure that is generated based on **data items** stored in a spreadsheet each having certain characteristic to be incorporated into the resulting executable procedure. In the claimed arrangement, “[t]he spreadsheet data is used to determine characteristics of the executable procedure” (page 2, lines 16-20). The executable procedure in the present invention is based on **data items** in a spreadsheet and **not** based on **formulae** and **spreadsheet formulae functions** as used in Peyton-Jones. The executive procedure in the present claimed invention is generated by the executable application and not a spreadsheet and generated based on **data items** stored in the spreadsheet and does not rely on the formulae function within a spreadsheet application program as in Peyton-Jones. Therefore, Peyton-Jones (with Richburg) neither discloses nor suggests “an executable application for parsing and processing said spreadsheet representative data to provide an executable procedure with characteristics determined by said individual data items” as recited in claim 1 of the present invention.

Peyton-Jones (with Richburg) also neither discloses nor suggests “processing data using said individual data items to provide processed data output” as recited in claim 1 of the present invention. Peyton-Jones merely processes formulae entered into a worksheet to provide a function within the spreadsheet and uses the formulae function of the spreadsheet application. In contrast, the present claimed invention processes data using individual data items stored within a spreadsheet that have characteristics that are incorporated into an executable procedure to provide processed data output. Specifically, unlike Peyton-Jones (with Richburg), in the claimed arrangement “an executable application” and **NOT** the spreadsheet generates the claimed executable procedure. The individual data items in the present claimed invention may consist of, for example, values for “Parameter Description”, “Delta Lock” and Parameter Value” (page 8, lines 16-28, Fig. 2a). The individual data items

in the present claimed invention are not the same as the formulae used to generate a function in Peyton-Jones. Rather, the individual data items in the present claimed invention refer to specific values in respective cells of a spreadsheet (page 7, lines 4-6). Unlike the claimed arrangement, Peyton-Jones (with Richburg) is concerned with formula and encapsulated formulae functions that can be imported, exported, customized and compiled (see para. 10). Therefore, Peyton-Jones (with Richburg) neither discloses nor suggests the present claimed feature.

Applicant respectfully submits that there is no reason or motivation to combine Richburg and Peyton-Jones. Richburg describes a system for automatic generation of program code using expert knowledge programmed into a knowledgebase. Peyton-Jones describes a user defined function capability in a spreadsheet application that allows users to create new named functions. While Richburg is concerned with generating output program code from standard code units within a knowledgebase, Peyton-Jones is concerned with allowing formulae in spreadsheets to be encapsulated or labeled to support reuse by the formulae function of the spreadsheet application. These two systems have wholly unrelated objectives and concern unrelated devices and/or systems. One skilled in the art of automatic program code generation from information stored in a knowledge base as in Richburg, would not seek to add new named functions in a spreadsheet application. Therefore, there is no reason or motivation to combine Richburg with Peyton-Jones. Additionally, Richburg requires the use of a static knowledge base file having standardized script and associated instructions contained therein to generate the output program code that accomplishes a particular task. Contrary to Richburg, Peyton-Jones enables user entry of a formula in a spreadsheet that can later be re-used by the spreadsheet application. Thus, Peyton-Jones is fundamentally different from, and incompatible with, the Richburg system because the results produced by the respective systems are incompatible with one another. Specifically, in Peyton-Jones the formula input is intended for use within the spreadsheet application and the Richburg system produces a stand-alone program from standardized knowledge base files containing instruction scripts. Furthermore, the Richburg system teaches away from a system such as the one described by Peyton-Jones. Richburg describes generating an application with a minimum amount of user programming from standardized files that can be readily combined to produce an application. The majority of the code in the generated application is taken from the static knowledge base file. However, Peyton-Jones specifically requires a user to create an entire formula before reuse. In fact, the Peyton-Jones system enables a user to create a user-

defined formula that can be stored and re-used later within the spreadsheet application. This user specification of formulae as taught in Peyton-Jones is fundamentally different from the mere compiling of different standardized coded building blocks as taught in Richburg. Therefore, Applicant respectfully submits that any combination of Peyton-Jones system with the Richburg system would produce an inoperable system that is unable to accomplish the stated objectives of either systems.

However, even if the systems of Richburg and Peyton-Jones were combined, the combined system would not suggest "an executable application for parsing and processing said spreadsheet representative data to provide an executable procedure with characteristics determined by said individual data items" for use in "processing data using said individual data items to provide processed data output" as recited in claim 1 of the present invention. The combined system would create a method of generating application specific program code that selectively extracts and modifies from knowledgebase storage units (col. 3, lines 42-48) which houses encapsulated functions that can be imported, exported, customized, and compiled by a user when creating a formula in a spreadsheet. In contrast, the present claimed invention generates an executable procedure based upon individual data items in a spreadsheet application (page 2, lines 14-22). Spreadsheet data is "utilized by an executive application to determine characteristics of an executable procedure" (page 7, lines 4-6). Unlike Richburg and Peyton-Jones, the present claimed invention advantageously allows spreadsheet data updates to be utilized through executable procedures by users without a requirement of any computer skills (page 13, lines 11-12). Furthermore, the present claimed invention teaches away from the combined system of Richburg and Peyton-Jones. The present claimed invention specifically provides a system where the user does not need to create SQL scripts or formulae to create or execute an executable procedure for updating a user application database. The creation of the executable procedure is essentially automatic. The executable procedure in the present claimed invention is independent of the spreadsheet it was generated from (page 10 lines 1-30, Fig. 4) and is created with characteristics associated with data items stored in the spreadsheet. Unlike the claimed arrangement, the combined system of Richburg and Peyton-Jones requires a user to select specific details and functions for an application (as in Richburg) or input a formula (as in Peyton-Jones) within the spreadsheet application itself. Therefore, the combination of Richburg and Peyton-Jones, neither discloses nor suggests "an executable application for parsing and processing said spreadsheet representative data to provide an executable procedure with characteristics

determined by said individual data items" for use in "processing data using said individual data items to provide processed data output" as recited in claim 1 of the present invention. Consequently, withdrawal of the rejections of claim 1 is respectfully requested.

Claims 2, 3 and 4 are dependent upon independent claim 1 and are considered patentable for the reasons presented above with respect to claim 1. Consequently, withdrawal of the rejections of claims 2, 3 and 4 are respectfully requested.

Claim 5 is dependent upon dependent claim 4 and is considered patentable for the reasons presented above with respect to claims 1 and 4. Consequently, withdrawal of the rejection of claim 5 is respectfully requested.

Claims 6 and 7 are dependent upon independent claim 1 and are considered patentable for the reasons presented above with respect to claim 1. Consequently, withdrawal of the rejections of claims 6 and 7 are respectfully requested.

Amended independent claim 8 recites a system for updating data items in a database. The system includes a repository including spreadsheet representative data. The spreadsheet representative data includes stored data elements comprising individual data items determining characteristics of an executable procedure. The system further includes an executable application for parsing and processing said spreadsheet representative data to provide an executable procedure for updating a data item in a database using one of said individual data items to replace a prior corresponding individual data item of a predetermined computation formula to provide an updated computation formula for use in processing data using said individual data items to provide processed data for output. The system also includes a command processor for initiating execution of said executable procedure in response to user command.

Amended independent claim 8 is considered patentable for the reasons presented above with respect to claim 1. Consequently, withdrawal of the rejection of claim 8 is respectfully requested.

Claim 9 is dependent upon independent claim 8 and is considered patentable for the reasons presented above with respect to claim 8. Consequently, withdrawal of the rejection of claim 9 is respectfully requested.

Amended independent claim 10 recites a system for generating an executable procedure. The system includes a repository including spreadsheet representative data. The spreadsheet representative data includes stored data elements comprising individual data items determining characteristics of an executable procedure. The system further includes an executable application for parsing and processing said spreadsheet representative data to provide an executable procedure for updating a data value in a database by using one of said individual data items to replace a prior corresponding individual data item of a predetermined computation formula to provide an updated computation formula. The executable application also re-computes a value of said data value using said updated computation formula. The system also includes a storage processor for updating said data value in said database with said re-computed value.

Amended independent claim 10 is considered patentable for the reasons presented above with respect to claim 1. Consequently, withdrawal of the rejection of claim 10 is respectfully requested.

Amended independent claim 11 recites a processing device implemented method for generating an executable procedure. Spreadsheet representative data is stored. The spreadsheet representative data includes stored data elements comprising individual data items determining characteristics of an executable procedure. The spreadsheet representative data is parsed and processed to provide an executable procedure with characteristics determined by said individual data items and for use in processing data using said individual data items to provide processed data for output. Execution of said executable procedure is initiated in response to user command.

Amended independent claim 11 is considered patentable for the reasons presented above with respect to claim 1. Consequently, withdrawal of the rejection of claim 11 is respectfully requested.

Amended independent claim 12 recites a processing device implemented method for updating data items in a database. Spreadsheet representative data is stored. The spreadsheet representative data includes stored data elements comprising individual data items determining characteristics of an executable procedure. The spreadsheet representative data is parsed and processed to provide an executable procedure for updating a data item in a database using one of said individual data items to replace a prior corresponding individual data item of a predetermined computation formula to provide an updated computation formula for use in processing data using said individual data items to provide processed data for output. Execution of said executable procedure is initiated in response to user command.

Amended independent claim 12 is considered patentable for the reasons presented above with respect to claim 1. Consequently, withdrawal of the rejection of claim 12 is respectfully requested.

Amended independent claim 13 a method for updating data items in a database. Spreadsheet representative data is stored. The spreadsheet representative data includes stored data elements comprising individual data items determining characteristics of an executable procedure. The spreadsheet representative data is parsed and processed to provide an executable procedure for updating a data item in a database. One of said individual data items is used to replace a prior corresponding individual data item of a predetermined computation formula to provide an updated computation formula. A value of said data value is re-computed using said updated computation formula. The data value is updated in said database with said re-computed value.

Amended independent claim 13 is considered patentable for the reasons presented above with respect to claim 1. Consequently, withdrawal of the rejection of claim 13 is respectfully requested.

In view of the above remarks, it is respectfully submitted that there is no 35 USC 112 compliant enabling disclosure contained within Richburg and Peyton-Jones, when taken alone or in combination, which make the present claimed invention unpatentable. As claims 2-7 and 9 are dependent on claims 1, 8, 10, 11, 12 and 13, respectively, it is respectfully submitted that they are allowable for the same reasons discussed above regarding independent

claims 1, 8, 10, 11, 12 and 13. Consequently, withdrawal of this rejection is respectfully requested.

Having fully addressed the Examiner's rejections, it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at the phone number below, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account 19-2179.

Respectfully submitted,



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